

Appendix

TDP2 negatively regulates axon regeneration by inducing SUMOylation of an Ets transcription factor.

Sakai et al. 2019.

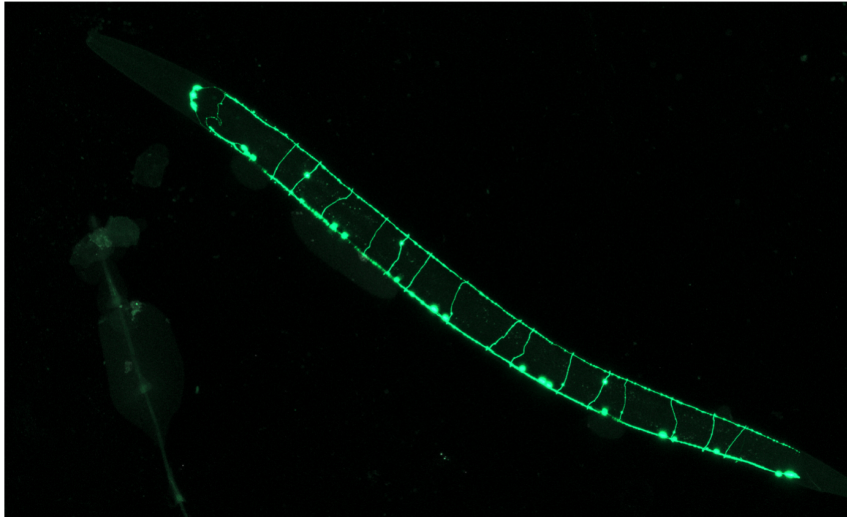
Appendix Figure S1: page 2

Appendix Figure S2: page 3

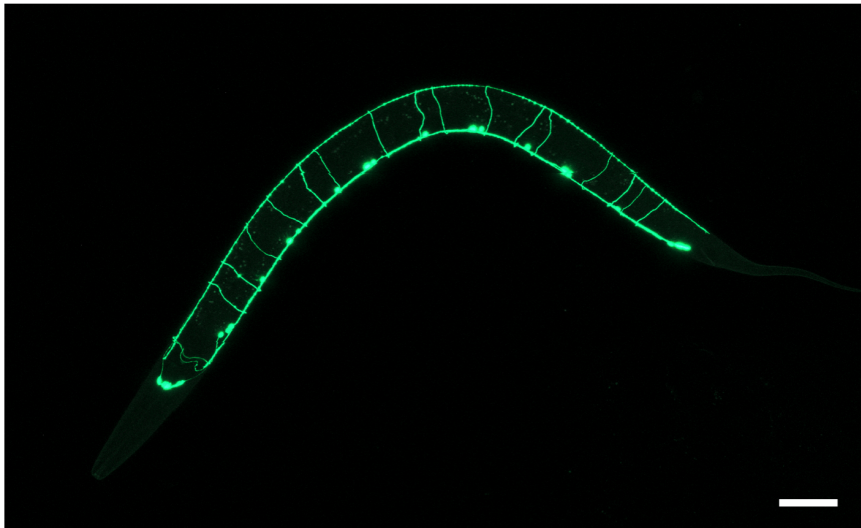
Appendix Table S1: page 4

Appendix Table S2: page 5

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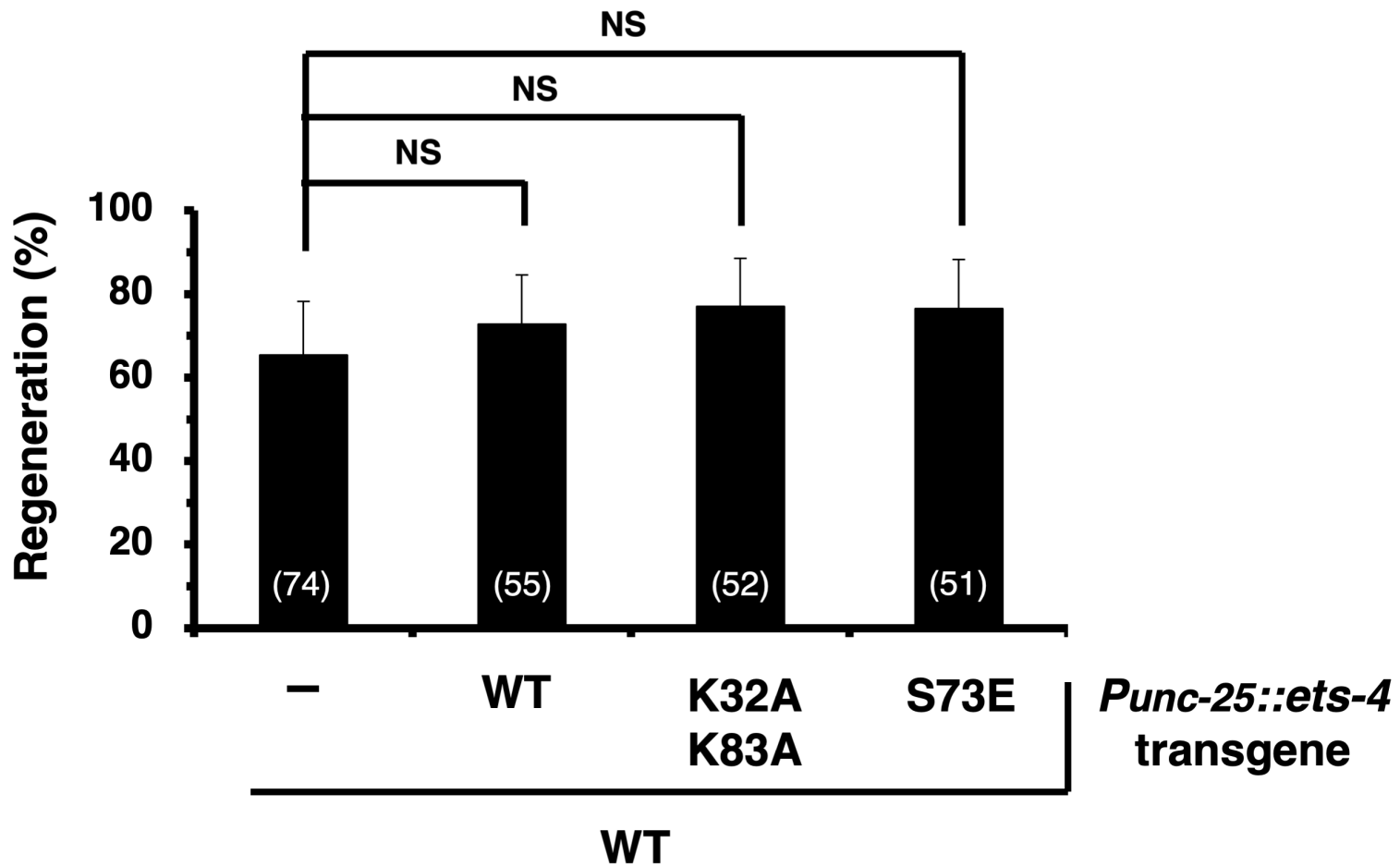


mxl-1



Appendix Figure S1. Morphology of D-type motor neurons.

Fluorescent images of D-type motor neurons in wild-type and *mxl-1(tm1530)* mutant animals carrying *Punc-25::gfp* are shown. D neurons are visualized by GFP under the control of the *unc-25* promoter. Scale bar = 50 μ m.



Appendix Figure S2. Effects of the *ets-4*(K32A; K83A) and *ets-4*(S73E) mutations on axon regeneration.

Percentages of axons that initiated regeneration 24 h after laser surgery are shown. The numbers (n) of animals examined are shown. Error bars indicate 95% CI.

Data information: Statistical significance was determined by Fisher's exact test; NS; not significant.

Appendix Table S1. Raw data for genotypes tested by axotomy

Strain	Genotype (<i>juls76</i> background)	No. of animals	No. of axons	No. of regenerations (% of total)	<i>p</i> -value	Compared with
KU501	wild type	38	74	50(68%)	-	-
KU503	<i>svh-2(tm737)</i>	26	59	11(19%)	<0.0001	KU501
KU545	<i>ets-4(ok165)</i>	29	71	31(44%)	0.0045	KU501
KU1501	<i>mxl-1(tm1530)</i>	27	51	17 (33%)	0.0002	KU501
KU1502	<i>mdl-1(tm311)</i>	24	63	45(71%)	0.7111	KU501
KU1503	<i>tdpt-1(km68)</i>	20	45	39(87%)	0.0285	KU501
KU1504	<i>mxl-1(tm1530); svh-2(tm737)</i>	24	53	16(30%)	0.1870	KU503
					0.8338	KU1501
KU1505	<i>mxl-1(tm1530); mdl-1(tm311)</i>	22	55	24(44%)	0.0075	KU501
					0.3213	KU1501
					0.0028	KU1502
KU1506	<i>tdpt-1(km68); mxl-1(tm1530)</i>	26	52	41 (79%)	0.2254	KU501
					<0.0001	KU1501
					0.4237	KU1503
KU1507	<i>tdpt-1(km68); ets-4(ok165)</i>	25	63	28 (44%)	0.0092	KU501
					1.0000	KU545
					<0.0001	KU1503
KU1508	<i>smo-1(ok359)</i>	31	75	62(83%)	0.0381	KU501
KU1509	<i>ubc-9(tm2610)</i>	22	50	44 (88%)	0.0104	KU501
KU1510	<i>smo-1(ok359); mxl-1(tm1530)</i>	25	60	46 (77%)	0.2561	KU501
					<0.0001	KU1501
					0.3966	KU1508
KU1511	<i>ubc-9(tm2610); mxl-1(tm1530)</i>	24	52	43 (83%)	0.0662	KU501
					<0.0001	KU1501
					0.5786	KU1509
KU1512	<i>mxl-1(tm1530); kmEx1512 [P_{unc-25}::mxl-1]</i>	10	25	16(64%)	0.8080	KU501
					0.0146	KU1501
KU1513	<i>mxl-1(tm1530); kmEx1513 [P_{mec-7}::mxl-1]</i>	12	22	8(36%)	0.7950	KU1501
KU1514	<i>mxl-1(tm1530); kmEx501 [P_{unc-25}::svh-2]</i>	47	110	82(75%)	<0.0001	KU1501
KU1515	<i>kmEx1515 [P_{unc-25}::tdpt-1]</i>	21	54	21(39%)	0.0021	KU501
KU1516	<i>ubc-9(tm2610); kmEx1515 [P_{unc-25}::tdpt-1]</i>	22	53	42(79%)	0.2925	KU1509
KU1517	<i>kmEx1517 [P_{unc-25}::mdl-1]</i>	23	50	20(40%)	0.0031	KU501
KU1518	<i>tdpt-1(km68); kmEx1517 [P_{unc-25}::mdl-1]</i>	20	47	42(89%)	0.7559	KU1503
KU1519	<i>kmEx1519 [P_{unc-25}::ets-4]</i>	21	55	40(73%)	0.5658	KU501
KU1520	<i>ubc-9(tm2610); kmEx1519 [P_{unc-25}::ets-4]</i>	19	48	43(90%)	1.0000	KU1509
KU1521	<i>kmEx1521 [P_{unc-25}::ets-4(K32A; K83A)]</i>	20	52	40(77%)	0.3177	KU501
KU1522	<i>kmEx1522 [P_{unc-25}::ets-4(S73E)]</i>	20	51	39(76%)	0.3195	KU501
KU1523	<i>mxl-1(tm1530); kmIs1523 [P_{unc-25}::ets-4]</i>	29	63	24(38%)	0.6956	KU1501
KU1524	<i>mxl-1(tm1530); kmIs1524 [P_{unc-25}::ets-4(K32A; K83A)]</i>	27	65	42(65%)	0.0014	KU1501
KU1525	<i>mxl-1(tm1530); kmIs1525 [P_{unc-25}::ets-4(S73E)]</i>	24	54	37 (69%)	0.0004	KU1501
KU1526	<i>mxl-1(tm1530); kmIs1526 [P_{unc-25}::ets-4(S73A; K32A; K83A)]</i>	26	55	25 (45%)	0.0432	KU1524

Appendix Table S2. Strains used in this study.

Strain	Genotype
KU501	<i>juls76 II</i>
KU503	<i>juls76 II; svh-2(tm737) X</i>
KU545	<i>juls76 II; ets-4(ok165) X</i>
KU1501	<i>juls76 II; mxl-1(tm1530) V</i>
KU1502	<i>juls76 II; mdl-1(tm311) X</i>
KU1503	<i>tdpt-1(km68) I; juls76 II</i>
KU1504	<i>juls76 II; mxl-1(tm1530) V; svh-2(tm737) X</i>
KU1505	<i>juls76 II; mxl-1(tm1530) V; mdl-1(tm311) X</i>
KU1506	<i>tdpt-1(km68) I; juls76 II; mxl-1(tm1530) V</i>
KU1507	<i>tdpt-1(km68) I; juls76 II; ets-4(ok165) X</i>
KU1508	<i>smo-1(ok359) I/szT1[lon-2(e678)](I;X); juls76 II</i>
KU1509	<i>juls76 II; ubc-9(tm2610) IV/nT1[unc(n754) let](IV;V)</i>
KU1510	<i>smo-1(ok359) I/szT1[lon-2(e678)](I;X); juls76 II; mxl-1(tm1530) V</i>
KU1511	<i>juls76 II; ubc-9(tm2610) IV/nT1[unc(n754) let](IV;V); mxl-1(tm1530) V</i>
KU1512	<i>juls76 II; mxl-1(tm1530) V; kmEx1512 [P_{unc-25}::mxl-1]</i>
KU1513	<i>juls76 II; mxl-1(tm1530) V; kmEx1513 [P_{mec-7}::mxl-1]</i>
KU1514	<i>juls76 II; mxl-1(tm1530) V; kmEx501 [P_{unc-25}::svh-2]</i>
KU1515	<i>juls76 II; kmEx1515 [P_{unc-25}::tdpt-1]</i>
KU1516	<i>juls76 II; ubc-9(tm2610) IV/nT1[unc(n754) let](IV;V); kmEx1515 [P_{unc-25}::tdpt-1]</i>
KU1517	<i>juls76 II; kmEx1517 [P_{unc-25}::mdl-1]</i>
KU1518	<i>tdpt-1(km68) I; juls76 II; kmEx1517 [P_{unc-25}::mdl-1]</i>
KU1519	<i>juls76 II; kmEx1519 [P_{unc-25}::ets-4]</i>
KU1520	<i>juls76 II; ubc-9(tm2610) IV/nT1[unc(n754) let](IV;V); kmEx1519 [P_{unc-25}::ets-4]</i>
KU1521	<i>juls76 II; kmEx1521 [P_{unc-25}::ets-4(K32A; K83A)]</i>
KU1522	<i>juls76 II; kmEx1522 [P_{unc-25}::ets-4(S73E)]</i>
KU1523	<i>juls76 II; mxl-1(tm1530) V; kmEx1523 [P_{unc-25}::ets-4]</i>
KU1524	<i>juls76 II; mxl-1(tm1530) V; kmEx1524 [P_{unc-25}::ets-4(K32A; K83A)]</i>
KU1525	<i>juls76 II; mxl-1(tm1530) V; kmEx1525 [P_{unc-25}::ets-4(S73E)]</i>
KU1526	<i>juls76 II; mxl-1(tm1530) V; kmEx1526 [P_{unc-25}::ets-4(S73A; K32A; K83A)]</i>
KU1527	<i>kmEx1527 [P_{unc-25}::cfp + P_{svh-2}::nls::venus]</i>
KU1528	<i>mxl-1(tm1530) V; kmEx1527 [P_{unc-25}::cfp + P_{svh-2}::nls::venus]</i>
KU1529	<i>tdpt-1(km68) I; kmEx1527 [P_{unc-25}::cfp + P_{svh-2}::nls::venus]</i>
KU1530	<i>tdpt-1(km68) I; mxl-1(tm1530) V; kmEx1527 [P_{unc-25}::cfp + P_{svh-2}::nls::venus]</i>
KU1531	<i>wpls36 I; kmEx1531 [P_{mdl-1}::nls::gfp]</i>
KU1532	<i>wpls36 I; kmEx1532 [P_{unc-25}::mdl-1::gfp]</i>